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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,982	03/14/2005	Toshio Kodama	S004-5433(PCT)	5212

40627 7590 09/28/2006

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EXAMINER	
BERMAN, JACK I	

ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/520,982	KODAMA ET AL.	
	Examiner	Art Unit	
	Jack I. Berman	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,8,9,13 and 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,8,9,13 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Figures 11 and 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujii et al. Fujii et al. discloses an ion beam apparatus comprising:

a holder member (sample stage 4) which holds a sample (5); and

a removing beam source (gas ion beam irradiation unit 3) which irradiates a gaseous ion beam (18) onto a processed surface of a sample held by the holder member and removes a contaminated layer (35) on the processed surface, which layer inherently includes the fracture layer referred to in the instant application since the processing done in the Fujii et al. system is the same as that disclosed in the instant application, the processed surface being formed by irradiating a focused ion beam (liquid metal ion beam 11),

wherein the gaseous ion beam is irradiated from a holding end side of the sample with respect to a direction vertical to the processed surface so that its irradiating direction is tilted with respect to the vertical direction, and

further comprising a processing beam source (liquid metal ion beam unit 2) which irradiates a focused ion beam (liquid metal ion beam 11) onto the sample held by the holder member and forms the processed surface.

Fujii et al. also discloses an ion beam processing method comprising:

a first step of irradiating a focused ion beam (liquid metal ion beam 11) onto a sample (5) and forming a processed surface; and

a second step of irradiating an inert gas ion beam (gas ion beam 18, which lines 49-53 in column 4 teach may be argon, as is used in the instant invention) onto the processed surface of the sample and removing a contaminated layer on the processed surface, which layer inherently includes the fracture layer referred to in the instant application since the processing done in the Fujii et al. system is the same as that disclosed in the instant application,

and wherein at the second step, the gaseous ion beam is irradiated from a holding end side of the sample with respect to a direction vertical to the processed surface of the sample so that its irradiating direction is tilted with respect to the vertical direction.

Claims 13 and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Hashikawa et al. At paragraphs [0004] - [0011], Hashikawa et al. discusses a conventional holder member comprising:

a base part (sample holder 100) which is rotatably supported about a first axis (the X-axis) in parallel with the horizontal direction;

a holding part (sample mount 101) which is rotatably disposed about a second axis (the Y-axis) orthogonal to the first axis at a tip end side of the base part and holds a sample where a focused ion beam is irradiated to form a processed surface (see paragraph [0004]); and

a drive module (the motor discussed at paragraph [0007]) which rotates the holding part about the second axis.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack I. Berman whose telephone number is (571) 272-2468. The examiner can normally be reached on Monday-Thursday (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jack I. Berman
Primary Examiner
Art Unit 2881

jb
9/26/06